

US EPA ARCHIVE DOCUMENT

## Comments on Louisiana Generation – Big Cajun II Generating Station Draft Report

EPA:

General comments:

- The section headings need to be re-formatted.
- Historical performance should not be a factor in making the determination that the impoundments are safe and stable. For example, on page 7-2: “The 30-year successful performance of the dike, the 3:1 slope geometry, and observations during the site visits indicate the existing impoundment is structurally stable under static conditions.” These determinations should be modified accordingly for all assessment criteria without considering past performance.
- Discuss whether any part of the impoundment is built over wet ash, slag, or other unsuitable materials (like TVA). State whether this is known or unknown.
- There appears to be a closure plan for the impoundments assessed in the final appendix of the report. However, closure of these impoundments is not mentioned in the body of the report. Please elaborate/clarify in the body of the report.
- All the appendices are not listed in the table of contents; appendix B is not the field inspection check lists. The inspection checklists should be more prominent. The inspection checklists are upside down in the appendices.

Page 2-1 and 2-2: Hazard potential ratings should be based on EPA’s criteria not LA’s criteria. The differences between the criteria can be discussed; however the ultimate hazard potential rating made by Dewberry should be based on EPA’s criteria.

Page 7-2 and 7-3: There is incongruence between sections 7.2 and 7.3. In section 7.2, Dewberry states: “Supporting documentation reviewed by Dewberry is not adequate to assess the structural stability of the existing impoundment dike.” In the next section Dewberry states: “The 30-year successful performance of the dike, the 3:1 slope geometry, and observations during the site visits indicate the existing impoundment is structurally stable under static conditions.” It is understood that one section concerns technical documentation and the other deals with field assessments, however, the positive field assessment determination should be tempered accordingly.

State:

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To: James Kohler/DC/USEPA/US@EPA  
Cc: Steve Vargo/R6/USEPA/US@EPA, Sanford Phillips <Sanford.Phillips@LA.GOV>, Stephen Hoffman/DC/USEPA/US@EPA  
Date: 10/13/2010 10:47 AM  
Subject: Comment Request on EPA Draft Assessment Report for Big Cajun II Generating Station

Dear Jim:

Per your e-mail request of Oct. 1, 2010, please be advised that Section 25 of Act No. 733 of 1981, which became Louisiana Revised Statute 38:21-28 (DAM SAFETY AND REGULATORY PROGRAM) <http://www.dotd.la.gov/intermodal/dams/rs38.aspx> states:

“Where the impoundment of liquid substances or hazardous wastes and materials by dikes, dams, or barriers is permitted or regulated under the Department of Natural Resources that office shall adopt rules and regulations for the construction, operation and maintenance of said facilities in accordance with the requirements, rules and regulations promulgated under this Chapter and such impoundments are exempted from the provisions of this Chapter.”

Note; The Environmental Division of the LA Dept. of Natural Resources (DNR) became the LA Dept. of Environmental Quality (DEQ) in 1984.

Additionally, see the following website for LA Dam Safety Rules and Regulations- [La DOTD - Dam Safety Program - Regulations](#).

Please ensure that the construction requirements including the factors of safety of the Louisiana Dam Safety Program for the proposed structures are met. Also, an Emergency Action Plan (EAP) must be developed for Significant and High Hazard Potential dams, in accordance with the requirements of the Louisiana Dam Safety Program.

If I may be of further assistance, please contact me at 225-274-4170.

Thanks, Bo

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Company: See three-page document attached.

**Comments from Louisiana Generating on Draft Report  
“Coal Combustion Waste Impoundment  
Round 5 – Dam Assessment Report”  
Big Cajun II Generating Station  
(Site No. 009)**

**Section 1.1.5 and Section 1.1.6**

The excess vegetation on areas of the embankment slopes noted in this section have been removed. Maintenance regarding vegetation control will be conducted to keep these areas clear of vegetative growth and allow for improved visual inspections.

**Section 1.1.8**

Big Cajun II objects to the classification in section 1.1.8 of the facility as “POOR” for continued safe and reliable operation merely “due to the lack of technical documentation.” The facility has operated without incident for over thirty years, which is the best evidence of its condition. The lack of technical documentation has no relevance or bearing whatsoever to the actual condition of the facility. Further, Dewberry correctly points out in its summary on p. ii that the Big Cajun II Ash Management Impoundment Dikes are “SATISFACTORY” for safe and continued operation.

**Recommendations**

**Section 1.2.1 Recommendations Regarding the Structural Stability**

Big Cajun II has been unable to locate any original design analyses. Big Cajun II has contacted the original geotechnical engineering firm which will review its files, and Big Cajun II has requested a proposal to perform a new geotechnical engineering evaluation.

**Section 1.2.2 Recommendations Regarding the Hydrologic/Hydraulic Safety**

Big Cajun II has contacted a geotechnical engineering firm and requested a proposal to perform a hydrologic/hydraulic analysis evaluating the impacts of a 1 percent probability (100-year) design storm on the management units.

**Section 1.2.3 Recommendations Regarding the Supporting Technical Documentation**

As noted above, Big Cajun II has proposed to conduct a slope stability analysis and hydrologic/hydraulic analysis of the existing impoundments. The Big Cajun II Emergency Action Plan will be amended to include a dam break response.

#### Section 1.2.5 Recommendations Regarding the Field Observations

The landside southern embankment along the Bottom Ash Pond will be investigated for any problems by a geotechnical firm, and any corrective measures will be conducted as necessary.

#### Section 1.2.7 Recommendations Regarding the Surveillance and Monitoring Program.

Big Cajun II conducts daily visual monitoring of the ash impoundments, including the bottom ash cell dike. Big Cajun II has contacted the Louisiana Department of Transportation and Development (DOTD), Dam Safety, and discussed the program. A program for periodic inspections by dam safety engineers will be implemented.

### **2.0 DESCRIPTION OF THE COAL COMBUSTION WASTE MANAGEMENT UNITS(S)**

#### Section 2.2 Size and Hazard Classification

Last paragraph of this section: "However, a catastrophic failure of the embankment is expected to result in a release of fly ash into the Mississippi River which is expected have significant environmental impacts. Therefore, Dewberry evaluated the dikes as "**Significant Impact**" hazards." This statement is incorrect.

The Field Observation Checklist in Appendix B of this report by Dewberry states that the water goes to False River, which is correct. A catastrophic failure of any embankment would not result in a release to the Mississippi River. The Mississippi River is bordered by a continuous levee of over 20 feet in height. Any failure would result in water flowing to the south/southwest to ditches that then lead to Patin Lake, and thence to False River Lake. Big Cajun II considers loss of life to be very unlikely, and economic loss and environmental impacts to be minimal due to the rural nature of the surrounding area.

#### 2.5 CRITICAL INFRASTRUCTURE WITHIN FIVE MILES DOWN GRADIENT

Second sentence: "Duke Slough" should be "Patin Lake"

### **3.0 SUMMARY OF RELEVANT REPORTS, PERMITS AND INCIDENTS**

#### Section 3.2 Summary of Local, State and federal Environmental Permits

Contact with Mr. Stephen Tassin of the Louisiana DOTD, Dam Safety, has been conducted concerning the Big Cajun II disposition under the Dam Safety program.

### **4.0 SUMMARY OF HISTORY OF CONSTRUCTION AND OPERATION**

#### Section 4.1.2 Significant Changes/Modifications in Design since Original Construction

The proposed expansion noted in this section applies only to the bottom ash impoundment.

### **5.3 OUTLET STRUCTURES**

#### **Section 5.3.1 Overflow Structure**

First sentence: “Fly ash process water and surface water....” Should read “Flyash surface water ...” The fly ash is hauled dry in trucks to the landfill, there is no process water involved.

#### **Appendix B Field Observation Checklist –**

The Checklist states that Shaw Group designed the levees. The original levees were designed by Burns and Roe/Bovay Engineers. Shaw has only been involved in design of a proposed height expansion of the bottom ash levee, which has not been constructed